



# **CITY OF PALMER**

Public Water System ID# 226020

231 West Evergreen Avenue • Palmer, Alaska 99645

Phone (907) 745-3271

## **2005 ANNUAL DRINKING WATER QUALITY REPORT**

We are pleased to present the 2005 Drinking Water Quality Report for the City of Palmer. This report is designed to keep you informed about the excellent water quality we have provided to you over the past year.

### ***Capital Projects***

During 2005 the City expanded its water and sewer distribution area with several large subdivisions being connected to the City's water and sewer systems, as well as water main construction on Helen Drive and in Palmer West Subdivision. The Southwest Utility extension project began construction in 2005 and continues in 2006 to extend the water and sewer lines to Trunk Road and the Parks Highway. We are working with the Alaska Department of Transportation to replace the water mainline along South Chugach and West Arctic.

### ***Water Sources***

Your water is supplied by four wells located in and just outside the city of Palmer. The production of water is primarily through alternating operation of wells 4 and 5; though they are capable of simultaneous operation if required. These two wells will normally supply 90% of your water. Well #1 runs as needed and supplies 10% of your water. Well #3 is exercised periodically, but is maintained as a backup water source.

The State of Alaska Department of Environmental Conservation (ADEC) has provided us with a source water protection plan and is available upon request for viewing.

### ***Water Treatment***

We are fortunate to have a good clean water source at the City of Palmer. Water is disinfected with a chlorine solution and fluoride is added to assist in preventing dental diseases. After treatment the water is either directly discharged into our distribution system or pumped to one of our four storage tanks.

## **Water Quality Data Table**

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

<u>Contaminants</u>	<u>MCLG</u> or <u>MRDL</u>	<u>MCL</u> <u>TT,</u> or <u>MRD</u>	<u>Your</u> <u>Water</u>	<u>Range</u>		<u>Sample</u> <u>Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			

<b>Inorganic Contaminants</b>								
Barium ( <u>ppm</u> )	2	2	0.0466	0.0175	0.0466	2002	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

<b>Radioactive Contaminants</b>								
Alpha emitters ( <u>pCi/L</u> )	0	15	1.7	NA		2005	No	Erosion of natural deposits
Radium (combined 226/228) ( <u>pCi/L</u> )	0	5	0.18	0.04	0.5	2005	No	Erosion of natural deposits
Uranium ( <u>ug/L</u> )	0	30	0.3	NA		2005	No	Erosion of natural deposits

<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your</u> <u>Water</u>	<u>Sample</u> <u>Date</u>	<u># Samples</u> <u>Exceeding AL</u>	<u>Exceeds</u> <u>AL</u>	<u>Typical Source</u>

<b>Inorganic Contaminants</b>							
Copper - action level at consumer taps ( <u>ppm</u> )	1.3	1.3	0.285	2004	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps ( <u>ppb</u> )	0	15	7	2004	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

In 2004 we tested 20 homes for lead and copper. The test result table reflects the highest level detected from all 20 homes. None of the samples exceeded the action level (AL) listed in the table. The next lead and copper testing will be done before the end of 2007; we will be required to test at least 20 homes depending on the population at the time of sampling.

**Disinfectants & Disinfection By-Products**  
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)

Haloacetic Acids (HAA5) (ppb)	NA	60	1100	NA	2004	Yes	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	5.31	NA	2004	No	By-product of drinking water disinfection

**Violations and Exceedances**

**Haloacetic Acids (HAA5)**  
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. The violation occurred in 7/2004.

<b>Unit Descriptions</b>	
<b><u>Term</u></b>	<b><u>Definition</u></b>
ug/L	ug/L : Number of micrograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

<b>Important Drinking Water Definitions</b>	
<b><u>Term</u></b>	<b><u>Definition</u></b>
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

### **Why are there contaminants in my drinking water?**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

### **Sampling Violations for 2005**

We are required by ADEC to sample for bacteria in 8 various locations throughout our water system each month. The City missed their sampling for the month of December 2005. As soon as this became evident the samples were taken immediately and were negative. We also missed the nitrate monitoring for 2005 which was taken immediately upon notification and as in previous years came up as non-detect. ADEC also requires us to test for Disinfection By-Product (TTHM & HAA5) annually the testing requirements are that the sample be taken from the farthest end of the distribution system at the warmest months of the year. We last tested in 2004 and exceeded HAA5's. We were required to test quarterly and did not test. We will begin testing in June of 2006 and each quarter thereafter to determine the running annual average for HAA5's. If we continue to exceed HAA5's we will evaluate our system and the chlorine being injected. We may have to install treatment to remove the HAA5's. You will be notified if this occurs.

## **Monitoring Results**

To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL (maximum contaminant level) for a lifetime to have a one-in-a-million chance of having the described health effect. The City of Palmer monitors the distribution system by doing bacterial samples eight times a month according to DEC regulations.

## **Questions?**

If you have any questions about this report or concerning your water utility, please contact Greg Wickham, Public Works Superintendent at 745-3925 or John Berberich, Water/Sewer Operator at 863-0746. All test results are available to the public either through the City of Palmer Public Works Department at 745-3925, or through the Alaska Department of Environmental Conservation, 1700 E. Bogard Road, Building B, Suite 202, Wasilla or 376-5038.

## **Public Information Notice**

To all residents of the City of Palmer:

The city is required under their National Pollutant Discharge Elimination System (NPDES) to develop a public information and education program to control the introduction of household hazardous material to the sewer system.

For example, some of the hazardous wastes found in homes are: acids, antifreeze, caustics, cleaners, disinfectants, floor wax, furniture stripper, herbicides, old medication, paint products, paint thinner, pcb's, pesticides, poisons, printing and photographic chemicals, solvents, transmission fluids, wood preservatives and many more.

To assist the city in keeping these items out of the sewer system it is requested that you contact the Central Landfill at 745-9838 for dates and times when you may bring hazardous wastes in for disposal.

Your cooperation in this matter will allow the city to operate its wastewater treatment facility in accordance with EPA requirements and the design of the facility.